2   Docket No. GJE-7020
                                          Serial No. 10/509,781

In the Specification

Please add the following paragraph at page 2, line 1, before "Description of the Preferred Embodiments":

Brief Description of the Figures

Figure 1 illustrates the absorption spectra of two different polymer matrix mediums compared to a control.

Figure 2 illustrates response times of two holograms, each using a different support medium, immersed in an analyte sample of increasing concentration.

Figure 3 is a diagrammatic representation of an embodiment of a holographic sensor of the subject invention.

Please add the following paragraph at page 2, line 18, after the paragraph ending with "support medium" and before the paragraph beginning with "A holographic sensor":

An embodiment of the sensor of the present invention is shown in Figure 3. A hologram element 1 comprises a holographic support medium 2 and a hologram 3 disposed throughout the volume of the medium 2. Additionally, the holographic support medium 2 contains pores 4.

Please substitute the following amended paragraph at page 2, line 18:

A holographic sensor 1 may be used for detection of a variety of analytes, simply by modifying the composition of the support medium 2. The medium 2 preferably comprises a polymer matrix the composition of which must be optimized to obtain a high quality film, i.e. a film having a uniform matrix in which holographic fringes can be formed. The matrix is preferably formed from the copolymerization of (meth)acrylamide and/or (meth)acrylate-derived monomers, and may be cross-linked. In particular, the monomer HEMA

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(hydroxyethyl methacrylate) is readily polymerisable and cross-linkable. PolyHEMA is a versatile support material since it is swellable, hydrophilic and widely biocompatible.

<u>Please substitute the following amended paragraph at page 3, line 8</u>

A sensor 1 of the subject invention comprises a hologram 3 disposed throughout the volume of a holographic support medium 2, which may be formed by the polymerisation of monomers or comonomers in the presence of an agent which produces a porous polymer matrix. The agent may be optimally selected for producing pores 4 of a specific dimension. This is particularly relevant when the analyte is sterically bulky, e.g. large biological molecules such as haemoglobin.